

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Dakota Formation Dakota County San Juan
Initial I Annual _____ Special _____ Date of Test April 20, 1960
Company Pan American Petroleum Corp. Lease Farnsworth Gas Unit "A" Well No. 1
Unit B Sec. 17 Twp. 30N Rge. 13W Purchaser _____
Casing 4-1/2 Wt. 9.5 I.D. 4.090 Set at 6142 Perf. 6005 To 6099
Tubing 2-3/8 Wt. 4.70 I.D. 1.995 Set at 5979 Perf. open ended To _____
Gas Pay: From 6005 To 6116 L 5979 xG 0.700 (est.) GL 4185 Bar.Press. 12
Producing Thru: Casing _____ Tubing I Type Well Single-Case
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 4-20-60 Packer None Reservoir Temp. 145° F

OBSERVED DATA

Tested Through (NONE) (Choke) (NONE) Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Choke) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
1.	Shut in 7 days	1/4	175		60 (est.)	1907		1907		3 hours
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	12.363		187	1.000	0.9298	1.003	2.89
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c _____ (1-e^{-s})
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1919 P_c 3,662,542

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w /P _c
1.						36,769	3,397,992		
2.									
3.									
4.									
5.									

Absolute Potential: 2396 MCFPD; n 0.75
COMPANY Pan American Petroleum Corporation
ADDRESS Box 457, Farmington, New Mexico
AGENT and TITLE E. H. Bauer, Jr., Area Engineer
WITNESSED _____
COMPANY _____

REMARKS



INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

- Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.
- P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia
- P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if
flowing through casing.) psia
- P_f = Meter pressure, psia.
- h_w = Differential meter pressure, inches water.
- F_g = Gravity correction factor.
- F_t = Flowing temperature correction factor.
- F_{pv} = Supercompressability factor.
- n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .

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